



THE UNIVERSITY OF
SYDNEY

—
Westmead Applied
Research Centre

QUARTERLY REPORT

Q3 July -Sept 2023

Director's Message



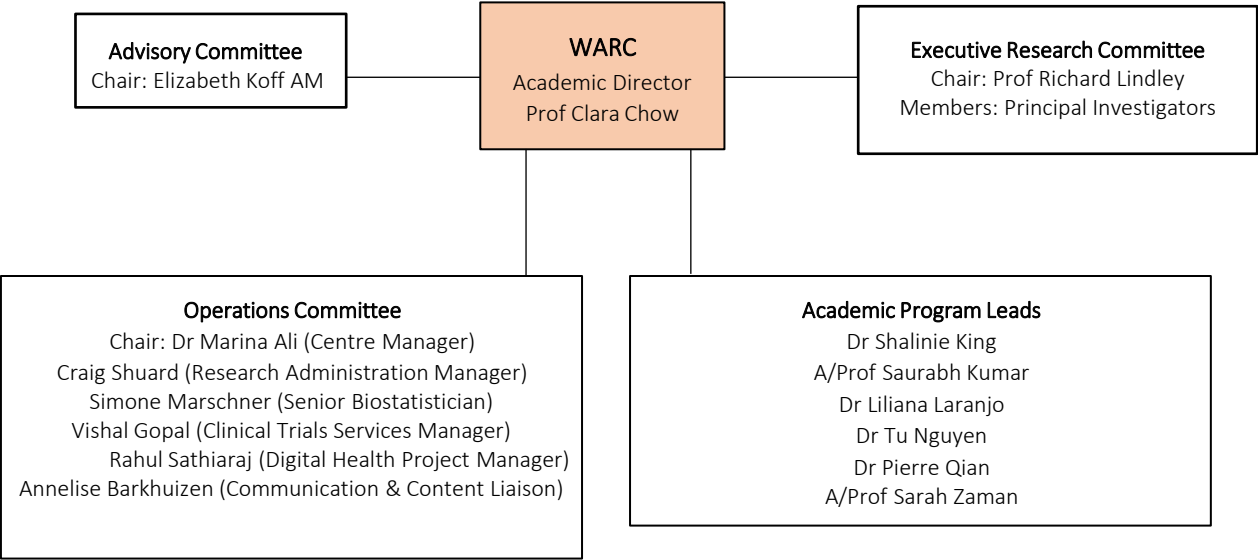
It's great to have the 5-year review now in our rear-view window and start thinking and planning for the next 5 years. The External and National Review panel had some great compliments about WARC which were a pleasure to receive as well as some constructive comments about how to think strategically and how to guide growth into the future. With these as well as our 5-year renewal finalised the team have commenced planning for our biennial Strategy retreat for March 2024. The retreat will give WARC Centre academic and professional teams an opportunity to plan the next big ideas and the strategies to operationalise these well. We are also planning several new initiatives in 2024. This includes updates and expansion of our popular "Research Matters" meetings. This will include inviting a wider audience to Research Matters and particularly inviting Health District and Community Health members to give greater opportunities to collaborate and work with WARC. This will also include an increase in invitations to external speakers, of which we already have some confirmed. Early 2024 will also see the implementation of the ClickUp project software to increase project management effectiveness and efficiency. The team have already spent substantial time in planning how to increase efficiency, inter-project communication and maintain high quality project delivery. With the growing size of WARC, we will also be updating our Governance structure with introduction of an "Executive Management" group.

The quarter has again seen some exciting events and achievements – with a great representation at both the international European Society of Cardiology Meeting and the Cardiac Society of Australia and New Zealand Meeting – bringing back a host of prizes that you can see in later pages of the report. We also have had several new members this quarter, and we welcome: Rahul Sathiaraj, Shive Narang and welcome back Harry Klimis.

Best wishes Clara Chow AM | Professor of Medicine and Academic Director

OUR STRUCTURE

GOVERNANCE



THE TEAM

Welcome to new team members

- Rahul Sathiaraj – Digital Health Project Manager
- Shiva Narang – Clinical Trials Coordinator

And welcome back Senior Lecturer, Dr Harry Klimis.



Rahul Sathiaraj



Shiva Narang



Harry Klimis

5 Year Review

In Q3 we participated in the Faculty of Medicines and Health's Review for all Research Centres. This was a great opportunity to reflect on our successes and many many achievements and look ahead to the next five years!

We received positive feedback and will continue to be forward thinkers tackling the toughest health challenges.

With thanks to WARC's Centre Manager Dr Marina Ali for her tireless efforts to support the continued success of WARC.



Dr Marina Ali

WARC AT A GLANCE

Overview of WARC activities to date, up to 30 Sept 2023

WARC ACTIVITIES



175

Partners



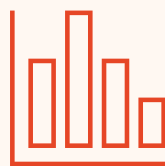
119

Active Projects



85

Team members



80

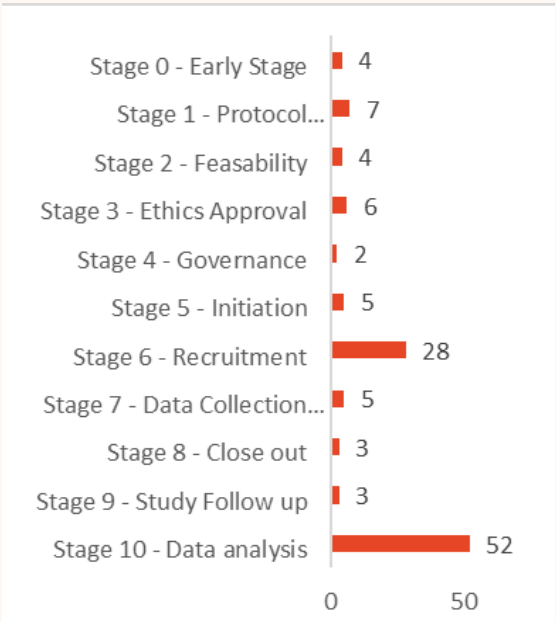
WARC-led statistical analyses



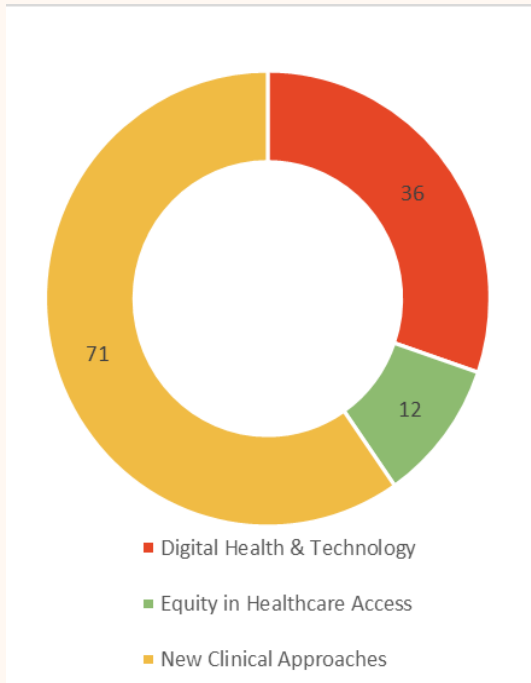
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Clinical Trials

PROJECTS STATUS



OUR RESEARCH THEMES



OUR PERFORMANCE

SOCIETAL IMPACT

What a quarter for WARC to showcase our hard work on the international, national and local stage.

ESC Amsterdam 2023

The European Society of Cardiology held its annual scientific meeting, the largest international cardiology meeting and a chance for WARC researchers and students to present to the global stage and learn from leaders in cardiovascular health research.



Attending the annual ESC Scientific Meeting

CSANZ Adelaide 2023

WARC was well represented at the Cardiac Society Australia and New Zealand (CSANZ) Annual Scientific Meeting. WARC broke records with number of nominations our team received for awards and prizes. WARC walked away with six awards



The WARC Team at CSANZ 2023

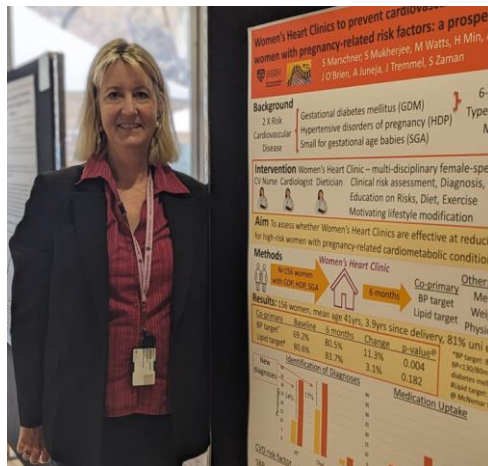
CSANZ Prize Winners

- Ashvin Bandomkhar (Medical Student/WARC) Heart Rhythm Prize Session Finalist
- Dr Timothy Campbell (Scientist/WARC) Heart Rhythm Prize Session Winner and Cardiac Imaging Prize Session Finalist
- Simone Marschner (PhD Candidate/Biostatistician/WARC) Clinical Trials Prize Session Finalist
- Sonali Munot (PhD Candidate/Project Manager/WARC) Preventative Cardiology Prize Session Winner
- Dr Anna Ne (PhD Candidate/Concord & WARC) Heart Rhythm Prize Finalist
- Samuel Turnbull (Cardiac Physiologist/WARC) Allied Health, Science and Technology Prize Session Winner

Congratulations to everyone who was nominated and our winners!

Westmead Health Precinct

We had the opportunity to collaborate with our colleagues at Hospital Week 2023 (Westmead) and Westmead Research Innovation Conference 2023.



PhD Candidate and WARC's Senior Biostatistician Simone Marschner presenting her poster at Hospital Week

OUR PERFORMANCE

PUBLICATIONS EXCELLENCE

PUBLICATION STATISTICS



40

Publications



24

High ranking
(IF > 5)



15

International
collaborations

WARC continues to produce high impact quality publications. In Q3 WARC led or contributed to 40 publications across all our research themes.

More than half of these were in top-ranking global journals (IJ > 5) and 15 of papers were co-authored with international researchers.

Congratulations to all our researchers who continue to deliver exceptional research.

FUNDING

Congratulations to our Dr Pierre Qian on some big funding success this quarter!

- McCusker Charitable Foundation Philanthropic Grant – Pierre Qian \$250k
- FMH Rewarding Research Success – Pierre Qian \$40k
- NHMRC Synergy Grant Funding (RMIT-led) - Pierre Qian \$390k



Dr Pierre Qian

Dr Pierre Qian is a clinician scientist based at Westmead Applied Research Centre and Clinical Academic in the Western Sydney Local Health District specialising in treatment of heart rhythm disorders using minimally invasive catheter ablation. He leads a translational biomedical engineering team Westmead Hospital innovating and developing novel cardiac ablation technology and techniques to advance the treatment of heart rhythm disorders and high blood pressure

OUR PERFORMANCE

Ignite 2023

Dr Liliana Laranjo and Dr Huong Ly Tong were (mini)keynote speakers at Ignite 2023 Physiotherapy Conference



Keynote speakers at Ignite 2023

MedConnect at UNSW

Professor Clara Chow had an opportunity to talk about improvements in medical specialist training for women and the remaining barriers for them at the MedConnect at UNSW event.



Prof Clara Chow at MedConnect 2023

OUTREACH

Great when our impact is recognised, especially within our Westmead Health Precinct and the University - amongst such a high calibre of work and inspirational leaders.



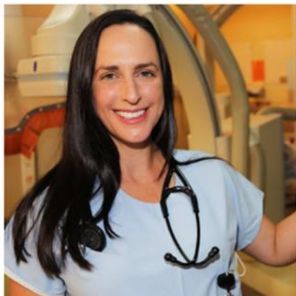
FMH researchers creating a community of healthier hearts

25 September 2023

Associate Professor Sarah Zaman and Dr Liliana Laranjo are working to improve earlier detection of heart disease and supporting people with high blood pressure to keep it under control.

What is CT coronary artery calcium scoring?

A CT coronary artery calcium scan, is a CT scan of the heart that can measure calcified plaque in the heart arteries. It can detect coronary heart disease (that can lead to heart artery blockages and heart attacks) often decades before symptoms develop. A CT Calcium Scan is quick (takes <5 mins), widely available, with similar radiation to a mammogram. Coronary artery calcium is found in both women and men.



Associate Professor Sarah Zaman. (Click to enlarge.)

How do you hope including a subgroup of First Nations women will help influence positive First Nations health outcomes?

The burden of coronary heart disease is incredibly high in First Nations women. It is the leading cause of the 'gap' that we see in outcomes between First Nations women and non-Indigenous women. We are recruiting a subgroup of First Nations women to this trial, to have a CT calcium scan of the heart. We will recruit Aboriginal and Torres Strait Islander women in our site in Darwin in the Northern Territory and also in Western Sydney through community contacts.

What do you hope to achieve through this trial?

This trial will determine if a CT scan of the heart can detect coronary heart disease in women who are at higher risk due to having female-specific risk factors (e.g. high blood pressure or diabetes during pregnancy, early onset menopause). It will study if a CT scan of the heart can improve control of risk factors for heart disease, such as high blood pressure and cholesterol as well as promote a healthy lifestyle, such as regular exercise and eating a heart-healthy diet.

This quarter we featured in University's Faculty of Medicine and Health (FMH) News.



Western Sydney Health
@WestSydHealth

Research at Westmead is world class & the 2023 Westmead Research and Innovation Conference was a testament to that.

Across two days recently Westmead's leading researchers showcased the amazing work happening now & previewed the future.

@WestmeadHub @clara_chow
@PabloFP_Syd

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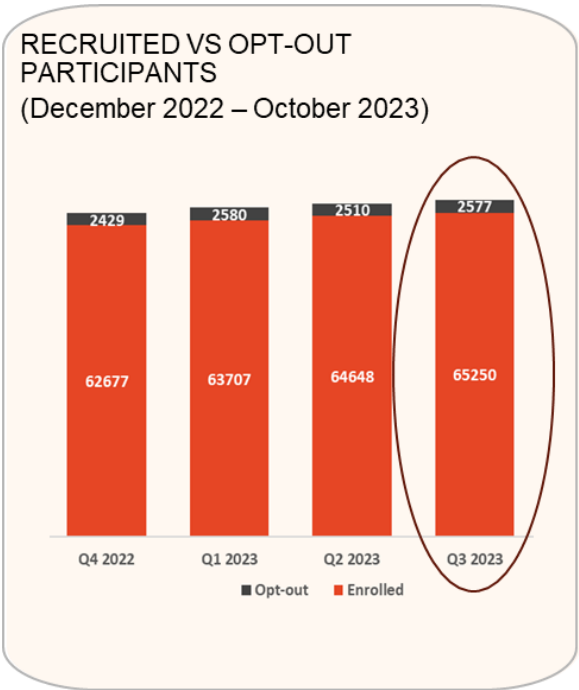
WARC's Academic Director and PI Pablo Fernandez presenting at 2023 Westmead Research and Innovation Conference

OUR PERFORMANCE

TEXTCARE UPDATE

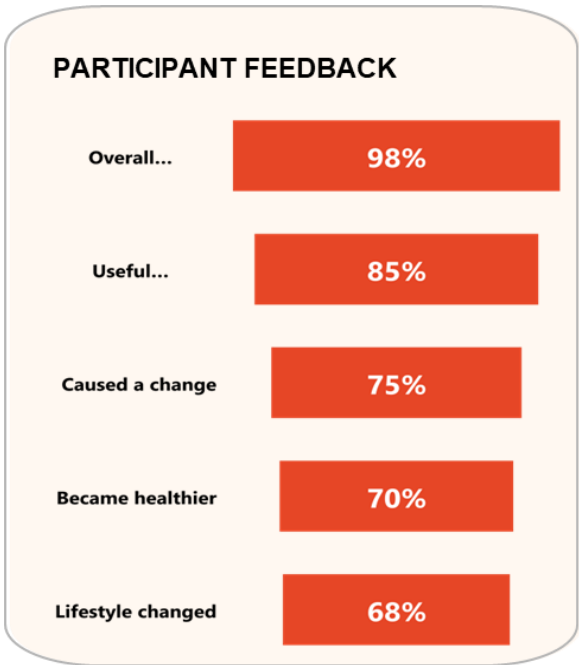
TEXTCARE continues to develop and grow. TEXTCARE is a vehicle for behaviour change using text messages. This quarter we saw:

It has a consistent track record in retention of participants and engagement, with very good patient feedback.



The platform now supports research groups and real-world applications across a variety of health disciplines. These include

- Heart Health
- Community Health
- Mental Health
- Diabetes
- COVID
- Women Health
- Pain Management
- Dental Hygiene
- Rehabilitation
- Medication Management
- Patient Monitoring



OUR PERFORMANCE

CLINICAL TRIALS

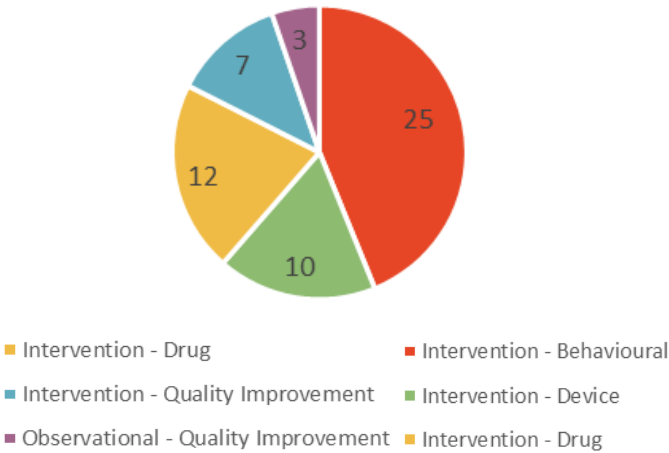
This quarter has been busy with several studies receiving ethics and governance approval and the 45&Up Mobile Health Study commencing recruitment!

CVD & OHE Study (CardioVascular Disease & Oral Health Education)	<ul style="list-style-type: none">Human Ethics ApprovalRecruited 1st participant
45 & Up Mobile Health Study	<ul style="list-style-type: none">Commence Recruitment

The international PROTECT-ICD Trial has hit the halfway mark and other clinical trials are well underway with recruitment.

SMILESup Trial (Supporting Mobile Intervention Lifestyle Evaluating Scale Up)	<ul style="list-style-type: none">Commence Recruitment (7 pts)
ARG Trial (Aortic Renal Ganglia) to induce arrhythmias	<ul style="list-style-type: none">Commence Recruitment (2 pts)
RELEVANT Trial (REsolution of Left VENTricular thrombus)	<ul style="list-style-type: none">Commence Recruitment (2 pts)
PROTECT-ICD Trial	<ul style="list-style-type: none">Completes half recruitment (570 pts)
RAPID Study (Safety efficacy study on Automated External Defibrillation)	<ul style="list-style-type: none">Recruitment Target Complete (7 pts)

CLINICAL TRIAL – FOCAL THEME



DIGITAL HEALTH

Three Digital Health projects have received approval from Human Research Ethics Commitment:

- CHAT-AF-S (Conversational HeAlth supportT in Atrial Fibrillation Self-Management)
- PARTICIPATE (PARTnering RemoTe monitoring of Implanted Cardiac devices with Intelligent PATient Engagement)
- WOBELS (Wearables for Blood Pressuring Lowering in Elderly People)



CHAT-AF-S Project logo

MICardiac recruitment

Using social media to support clinical trial recruitment has been an exciting initiative for the MICardiac trial. Since advertising on Facebook, LinkedIn and X the project has received 181 expressions of interest and 29 randomised patients – a great outcome for the Team.



Example of social media ad for MICardiac

OUR PERFORMANCE

FEATURED STUDENT

Bystander response makes a significant difference to survival in out-of-hospital cardiac arrests. Yet, a significant proportion of the general public are not trained in basic life support skills and are not prepared to respond. Sonali has recently completed her doctoral studies in public health that focussed on ‘understanding barriers in the community to learning and responding to cardiac arrest – with a focus on NSW multiethnic communities’. She was supervised by Professors Clara Chow and Julie Redfern.



Dr Sonali Munot – WARC EMCR

The FirstCPR cluster randomised trial implemented as part of her studies is a community-based intervention aimed at increasing layperson training and willingness to respond to a cardiac arrest emergency. The study also enabled an in-depth examination of attitudes to response among some of the dominant migrant groups in our community. Process evaluation of FirstCPR has provided valuable insight into the implementation of community-based interventions and factors related to participant reach and engagement. Sonali is passionate about implementation research and keen to continue contributing towards preventive medicine and public health initiatives that lead to community empowerment and better health outcomes.

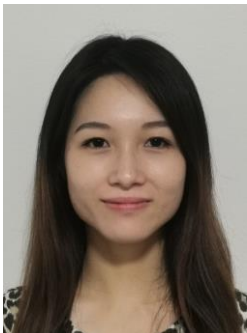
FEATURED TEAM

Dr Edel O’Hagan is an early career researcher at Westmead Applied Research Centre and a registered Physiotherapist. Her PhD focused on delivering patient education to promote self-management of back pain. She applies the knowledge gained to support the care of other chronic conditions such as hypertension

Ms Wendy Liu works as a Research Assistant at WARC and has a background in physiotherapy. Wendy is currently pursuing a Master of Biostatistics. Her professional journey has been driven by a passion for empowering individuals to actively manage chronic conditions, particularly through the exciting realm of digital health.

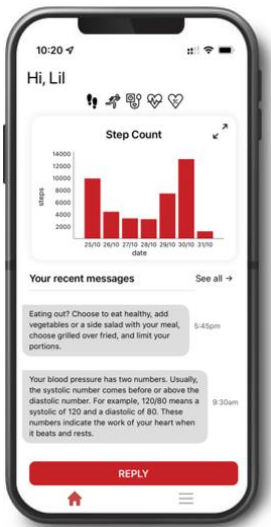


Dr Edel O'Hagan – WARC EMCR



Wendy Liu – WARC RA

MICardiac is a multi-centre randomised controlled trial which aims to investigate the effect of a mobile health program optimised with artificial intelligence on Systolic Blood Pressure and other cardiovascular risk factors in adults with high blood pressure. Dr Edel O’Hagan has been involved in the design of the intervention and all procedural aspects of the trial.



MICardiac digital app interface

APPENDIX 1 - PUBLICATIONS

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15. Kovoov JG, Deshmukh T, von Huben A, Marschner SL, Byth K, Chow CK, et al. Optimizing electrophysiology studies to prevent sudden cardiac death after myocardial infarction. *Europace*. 2023;25(7).
16. Kumar S, Bhaskaran A. Old Habits Die Hard: Is Coronary Assessment in Ventricular Tachycardia Storm Still Necessary? *JACC Clin Electrophysiol*. 2023;9(9):1900-2.
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PUBLICATIONS

33. Pant A, Gribbin S, McIntyre D, Trivedi R, Marschner S, Laranjo L, et al. Primary prevention of cardiovascular disease in women with a Mediterranean diet: systematic review and meta-analysis. *Heart*. 2023;109(16):1208-15.
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